# Functions (2)

1. $f(x) = 6x - 3$.

   (a) Evaluate (i) $f(-3)$ (ii) $3f(2) + f(-1)$
   (b) Given $f(x) = 27$, find x.

2. $f(x) = 10 - \frac{1}{2}x$

   (a) Find (i) $f(2)$ (ii) $4f(-6)$
   (b) Given $f(a) = 6$, find a.

3. $g(x) = x^3 - 1$.

   (a) Find $g(-1)$
   (b) Given $g(x) = 26$, find x.

4. $f(x) = 2x^2 - 5x$.

   (a) Find $f(3)$.
   (b) Find $2f(-4)$

5. $h(x) = x^2 - 3$.

   (a) Evaluate $h(-2)$
   (b) Given $h(x) = 13$, find **two** values for x.

6. $f(x) = x^2 + 9$.

   (a) Find $f(-2)$
   (b) Given $f(p) = 18$, find p.

7. $g(x) = 2x^2 - 1$.

   (a) Find $g(-4)$.
   (b) Given $g(a) = 7$, find a.

8. $k(x) = 2x^2 - 6x$.

   (a) Find $k(-5)$.
   (b) Given $k(x) = 0$, find x.

9. $f(x) = 10x - 5x^2$

   (a) Find $f(-1)$.
   (b) Given $f(x) = 0$, find x.

10. $f(x) = x^2 - 7x$.

    (a) Find $f(-3)$.
    (b) Given $f(x) = -12$, find x.

11. $g(x) = x^2 - 6x$.

(a) Evaluate g(-3).
(b) Given g(a) = 16, find a.

12. $h(x) = 3x^2 + 5x$.

(a) Find h(-1).
(b) Given h(n) = 12, find n.

13. $f(x) = 7x - 2$ and $g(x) = 5x - 14$.

Given f(x) = g(x), find x.

14. $f(x) = x^2 - 3x$ and $g(x) = 2x - 4$.

Given f(x) = g(x), find x.

15. $h(x) = x^2 - 8x$ and $k(x) = 36 - 3x$.

Given h(x) = k(x), find x.

16. $f(x) = 2x^2 - x$ and $g(x) = 10 - x^2$.

Given f(x) = g(x), find x.

17. $g(x) = 5x^2 - 2x$ and $h(x) = 2x + 4$.

Given g(x) = 2h(x), find x.

18. $f(x) = 3x - 4$.

(a) Find (i) f(3) (ii) f(-2).
(b) Hence sketch the function $f(x) = 3x - 4$.

19. $g(x) = \frac{1}{3}x - 2$.

(a) Evaluate (i) g(6) (ii) g(-9).
(b) Hence sketch the function $g(x) = \frac{1}{3}x - 2$.

20. $k(x) = 6 - 3x$.

(a) Find (i) k(3) (ii) k(-1)
(b) Hence sketch the function $k(x) = 6 - 3x$.